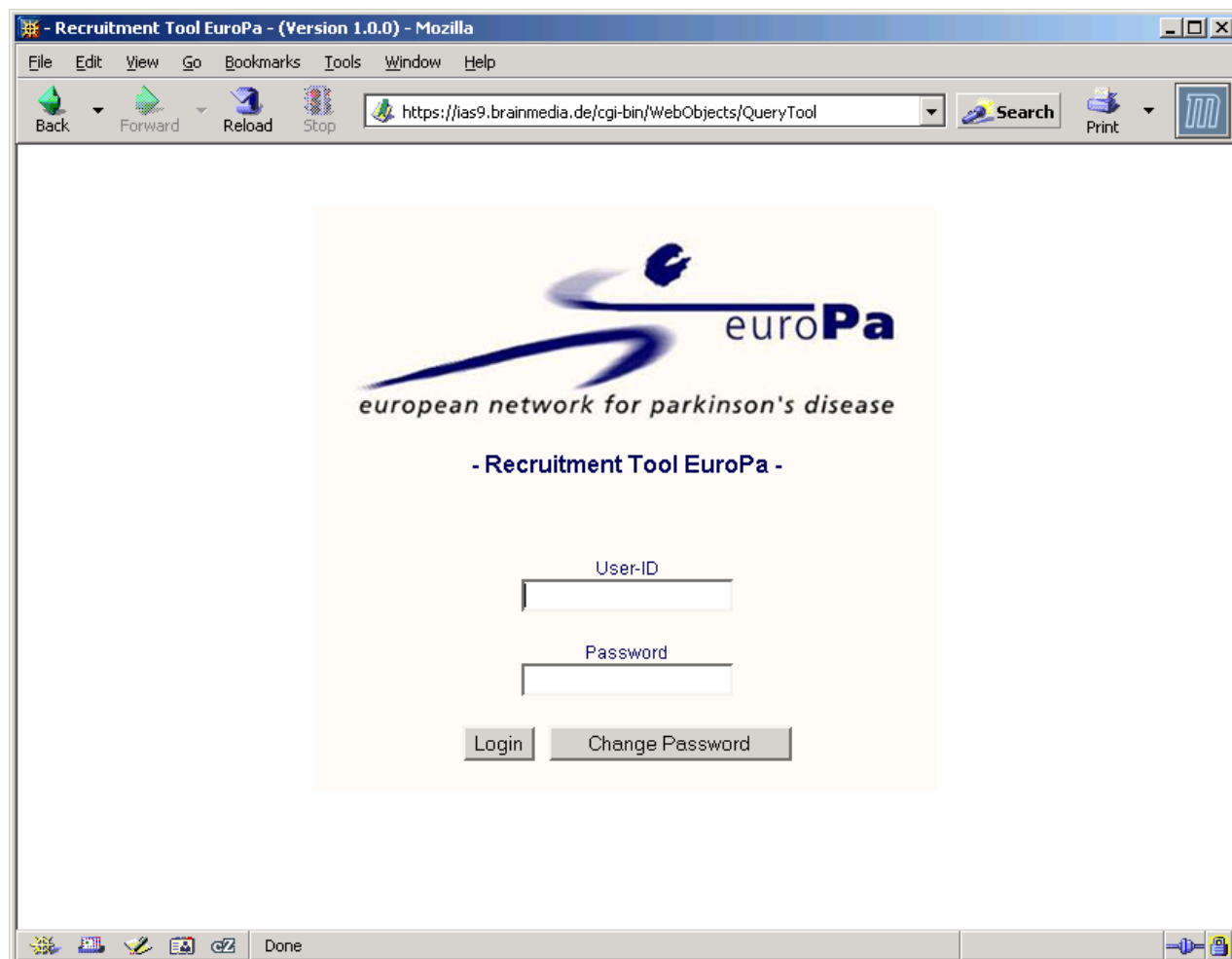


## Content

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## 1. Description

The Recruitment Tool runs separately as a stand-alone application alongside the EuroPa application. It provides the possibility to query the medical data stored in the EuroPa database<sup>1</sup>.

A query<sup>2</sup> takes two steps. First a general query form is created. It contains the questions you want to include into the search. After saving, the values that you want to use as search criteria are entered into the form. Running the query yields a list of pseudonyms that match all search criteria.

Functions:

1. Create and save new database queries
2. Reopen previous queries
3. Generate a list of patient pseudonyms matching the search criteria

## 2. Access

In the AdminTool, participants are assigned access rights, and it is made explicit which participants have the right to perform queries with the Recruitment Tool and which do not.

The individual center-based participants who have a right to use the Recruitment Tool (e.g. centre managers) are able to search in their own center and produce simple statistical reports.

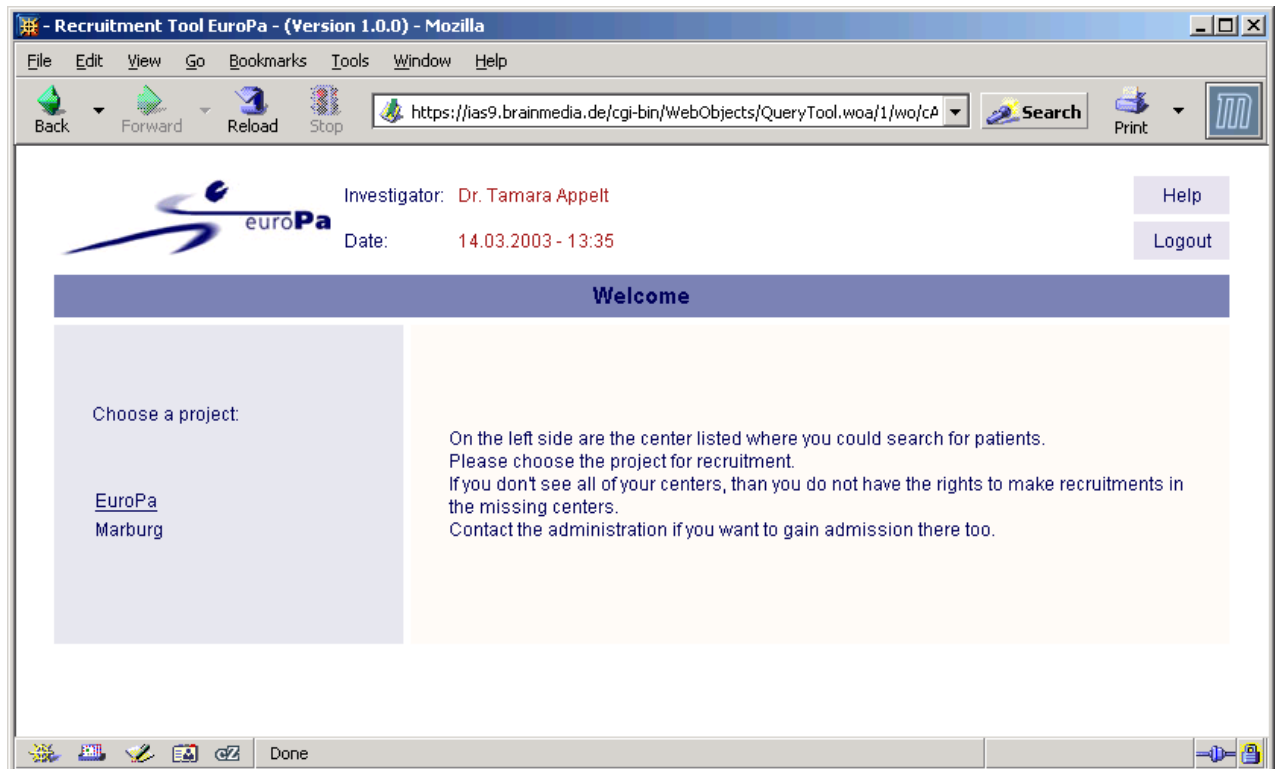
Participants using the Recruitment Tool can only see their own queries and those of colleagues in their own center. However, results are only shown for the participants own queries.

<sup>1</sup> Only original data is included into the search. Any changed or modified data - logged in the Audit - Trail are not considered.

<sup>2</sup> A search based on defined criteria so as to retrieve a list of matching medical data associated PIDs from the database

### 3. Welcome Page

On the welcome page, you can select the project that you want to perform a query in. By now the only project in EuroPa is the patient registry. Below the project, the centre is listed for which the user has recruitment rights.



Welcome page – selecting a project (in this case there is only one)

### 4. Performing Queries

In the Recruitment Tool, the user can select whether to create a new query or to run a previous query again with new or the same search criteria.

To create a new query, use the forms area in the Recruitment Tool ("Forms"). Previous queries and their search criteria are stored in the "History".

#### 4.1 Forms

The Search Forms page (see fig. below) provides the possibility to create new query forms as well as the access to previously saved queries.

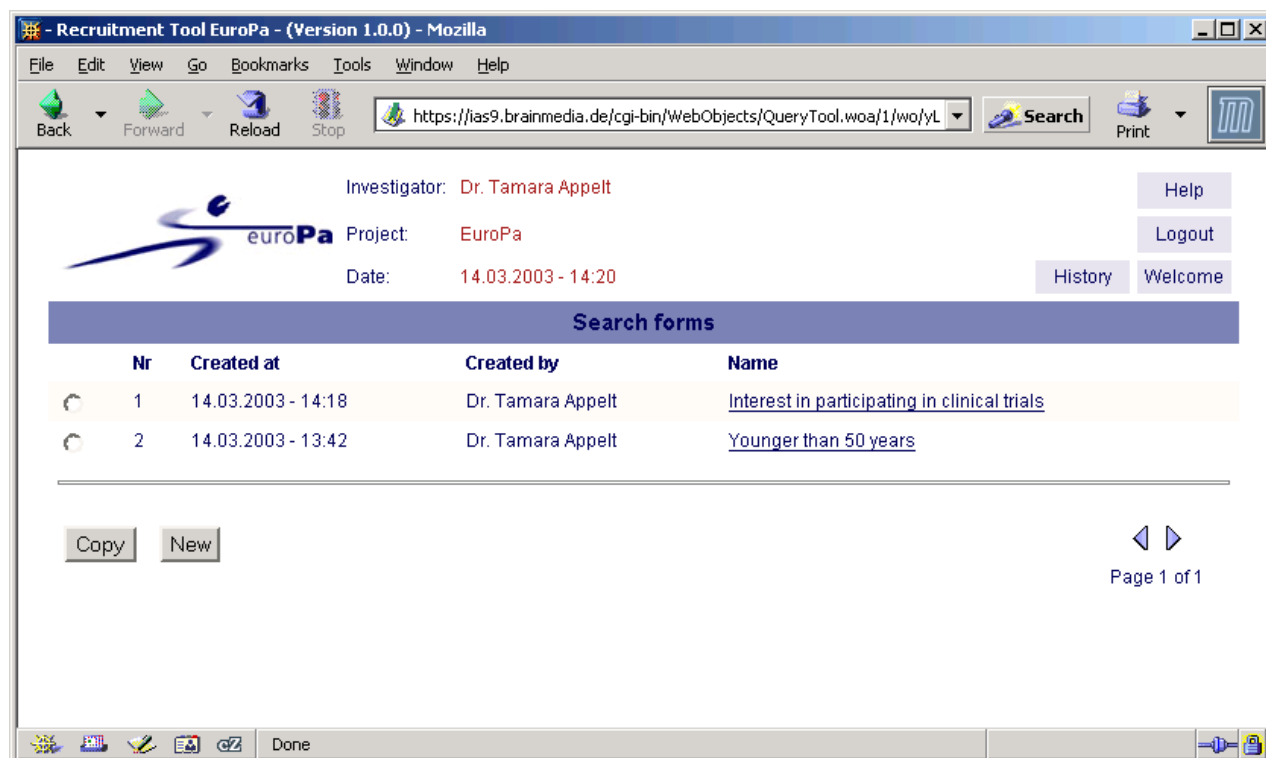
The forms overview lists all saved queries. The table shows the following information:

- Created at
- Created by
- Name (of the query)

Clicking on any column header sorts the table by the respective column. The numbering at the beginning of the rows is intended for orientation only and is *not* an identification criterion.

To create a new query form, go to the "Create new search form" page by clicking on the "NEW" button or by using an existing form as a template and copying it. To do this, select it using the radio button in front of the row and click on the "COPY" button. The original form remains unchanged.

Finally, it is also possible to open a particular form (without search criteria) by clicking on the form name, which links to the respective form.



*Table view of existing query forms*

The navigation buttons at the top right of the window enable you to open the help text, exit the Recruitment Tool or go back to the welcome page (HELP, LOGOUT, WELCOME). The "HISTORY" button takes you to the "History" page.

#### 4.1.1 Creating a New Query Form

The following steps are involved in creating a query form:

1. Specify a name for the query
2. Select the form group from which you want to use forms (drop down list)
3. Select the form family
4. Select the forms
5. Select the questions

In the EuroPa Patient Registry you can select the Visit or Patient Exit form group. Depending on the selection, the associated form families are listed. The forms they contain and their questions can each be listed by selecting the triangle by their name. Questions (but not yet the answers) are added to the query form by setting the corresponding checkbox (cf. fig.).

*Creating a new query form – selecting the questions. In the example shown the search is containing the question “Gender” from the form “Personal Data”. You can not yet select whether you want to search for female or male patients.*

Questions within a question group have a logical “AND” relationship, i.e. the results will contain those pseudonyms matching all the search criteria.

If you want to include alternative criteria in the search, you need to create a second question group. This group applies in addition to the first group (logical “OR”). The “OR” link adds an additional form set (which can be removed by clicking on the “REMOVE” button). Within this group as well, all questions are linked with “AND”.

Example: You want to search the database for male or female patients with the Diagnosis initial PD (iPD). Therefore you have to create a first question group containing the criteria “Gender” and “Diagnosis” and a second one (by clicking on “OR”) containing the same criteria. After saving you can enter the respective values which is then resulting in the search instruction: select all PIDs where Gender = male AND Diagnosis = iPD OR Gender = female AND Diagnosis = iPD.

You can save the newly created query form by clicking on the “SAVE” button. The “BACK” button takes you back to the previous page without saving changes.

#### 4.1.2 Saved Query Forms

Saved query forms can be used:

- As a starting point for creating a new query form (e.g. to expand it with additional questions)
- To search in the medical database using modified search criteria

To use an existing query form as the basis for a new query form, you can select it in the overview table using the radio button next to it. Then click on the "COPY" button to create a new version of this form, to which you have to assign a new name. You can now add or remove questions. This does not change the original form.

If you want to use a saved form for carrying out a query, you can click on the name of the form, which is linked to the respective query page (Make search 'XY'). Here you can set the search criteria you are interested in (see below).

#### 4.2 Perform a Query

The following information has to be entered in the query form to be able to carry out a query of the registry:

1. Define the search criteria
2. Define the data basis
3. Select whether you want to save the result
4. Start the query

##### Search Criteria:

In order to define the search criteria, the original "registry questions" and their possible answers are so displayed to enter the desired value of the field (cf. fig.). The search form slightly differs from the original registry data entry form with respect to a new checkbox which is added. This checkbox specifies whether you want to include a specific criterion into your search or not. These checkboxes are marked by a pink coloured background (cf. fig.).

Hence, if you want to include a question or answer option into the search you first have to make sure that the checkbox in the corresponding field "use criteria for search" (pink coloured) is checked. In a second step the answer option (yellow region) you are looking for has to be provided as well. Marking only the checkbox in the pink region of a question and not the one in the corresponding yellow region would mean, that you are only searching for patients who do not fulfil this question!

##### Example:

You want to search the registry for all male patients who were "ever exposed" to L-Dopa-Standard but did not "discontinue because of side effects" and did not receive L-Dopa-Standard as "first drug treatment". (Compare with the figure below)

Section "A Personal Data" → Question: "2. Gender"

- 1<sup>st</sup> Mark the checkbox (pink region) of this question to mark it as a search criterion
- 2<sup>nd</sup> Select the Radiobutton "male" in the yellow region

(Search Result now would be: -> all male patients)

Section "C Drug History" → Question: "1. L-Dopa-Standard"

- 3<sup>rd</sup> Mark the checkbox (pink region) of this question corresponding to "ever exposed" to mark it as a search criterion
- 4<sup>th</sup> Mark the checkbox (Yellow region) of this question corresponding to "ever exposed"

(Search Result now would be: -> all male patients who were ever exposed to L-Dopa-Standard)

- 5<sup>th</sup> Mark the checkbox (pink region) of this question corresponding to "discontinued"
- 6<sup>th</sup> Do NOT mark the checkbox (Yellow region) of this question corresponding to "discontinued because of side effects"

(Search Result now would be: -> all male patients who were ever exposed to L-Dopa-Standard but did not discontinue it because of side effects)


- 7<sup>th</sup> Mark the checkbox (pink region) of this question corresponding to "first drug treatment"
- 8<sup>th</sup> Do NOT mark the checkbox (Yellow region) of this question corresponding to "received as first drug treatment".

(Search Result now will be: -> all male patients who were ever exposed to L-Dopa-Standard but did not discontinue it because of side effects and did not receive it as first drug treatment)



- Recruitment Tool EuroPa - (Version 1.6.11) - Netscape

File Edit View Go Communicator Help

 Investigator: Dr. Friederike Herz Project: EuroPa  
Date: 17.04.2003-15:08 Form: L-Dopa Standard\_2

Welcome Help Logout  
Forms History

Make search "L-Dopa Standard\_2"

☒ Use criteria for search

**A Personal Data**

**2. Gender**  
female male  
☒ ☐ ☐

**C Drug History**

|                        | ever exposed                        |                                     | discontinued because of side effects |                          | received as first drug treatment    |                          |
|------------------------|-------------------------------------|-------------------------------------|--------------------------------------|--------------------------|-------------------------------------|--------------------------|
| 1. L-Dopa Standard     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/>  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. L-Dopa Slow Release | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>             | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| 3. L-Dopa Soluble      | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>             | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| 4. L-Dopa-Ethylester   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>             | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| 5. L-Dopa Dual Release | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>             | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| 6. Others              | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>             | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

**D Current Drugs**

☐ 1. L-Dopa Standard ☐ empty ☐ yes ☐ no  
☐ 2. L-Dopa Slow Release ☐ empty ☐ yes ☐ no  
☐ 3. L-Dopa Soluble ☐ empty ☐ yes ☐ no  
☐ 4. L-Dopa-Ethylester ☐ empty ☐ yes ☐ no  
☐ 5. L-Dopa Dual Release ☐ empty ☐ yes ☐ no  
☐ 6. L-Dopa Others ☐ empty ☐ yes ☐ no  
☐ if OTHERS: specify

Example of a search form. Questions from three registry forms have been selected in the step before. For the subsequent query of the registry, criteria have now to be defined by marking the respective checkboxes. For each question there are pink and yellow regions. Checkboxes in pink regions define answers you want to include into the query, the corresponding yellow regions represent the answer option of the original data entry form.

| Search criteria                 |  |
|---------------------------------|--|
| Drug History - L-Dopa Standard: | discontinued because of side effects: no |
| Drug History - L-Dopa Standard: | ever exposed: yes                        |
| Drug History - L-Dopa Standard: | received as first drug treatment: no     |
| Patient Data - Gender:          | male                                     |

Summarized search criteria (as shown below the results of the search)

For numerical data, text and date fields, you can specify “greater”, “equal”, “less” or “different” than value.

For numerical values, the following can be used to define a range:

- > (greater than)
- < (less than)
- <= (less than or equal to)
- >= (greater than or equal to)
- <> (not equal to)
- = (equal)

For text fields, you can specify the following:

- = (equal)
- <> (not equal to)
- contains (contains)

Clicking the “AND” button generates an additional field for the same question, in order to specify the search criteria still further. It can be deleted by pressing the “REMOVE” button.

All search criteria within a question group have a logical “AND” link. By contrast, different question groups are related with a logical “OR”.

#### *Data Basis (Pool):*

To restrict the search area you can specify the data basis:

- Time period recorded (e.g. last visit, first visit, all)
- Form status
- Time period you want to search in
- Centers that the user is entitled to run queries in

Recruitment Tool EuroPa - (Version 1.0.0) - Mozilla

File Edit View Go Bookmarks Tools Window Help

Back Forward Reload Stop <https://ias9.brainmedia.de/cgi-bin/WebObjects/QueryTool.woa/1/wo/6hzZ7HfsxamHv6ovDnuCYw/6.3.3.9.3.15> Search Print

Home Bookmarks

Investigator: Dr. Tamara Appelt Form: Younger than 50 years Help

Project: EuroPa Forms Logout

Date: 17.03.2003 - 15:03 History Welcome

**Make search "Younger than 50 years"**

☒ Use criteria for search

**A Personal Data**

1. Date of Birth

☒   m.m.yyyy

**Data pool**

Survey period:

Form status:

Period start at:

Period ends at:

Center:

Multiple selection with CTRL

☒ Store result

*Defining the search criteria and the data basis for the database query*



The time period has to be specified by a start and an end date. The date the patient's medical data was saved in the registry is taken as a reference. The pre-selected time period is one year, back in the past.

When you have supplied all the necessary constraints, you can start the query in the medical database by clicking on the "SEARCH" button. If the "Store results" checkbox is ticked, then the results of the query are saved permanently so as to be easily retrieved and repeated via the "History".

#### 4.3 Query Results

A list of pseudonyms which associated medical data match the search criteria is given as a result of the database query. The associated search criteria and data basis are shown below the result table.

The result table contains pseudonyms, status (e.g. active, deceased), the center the patient is assigned to, the assigned EuroPa participant and the date of the visit. This list can be filtered by patient status, center and EuroPa participant.

In order to include pseudonym in the result list, all search criteria must be fulfilled in at least one saved data set. Only original data is considered. All changed or modified entries - logged in the Audit Trail - are not considered.

"Search Criteria", "Data Basis" and "Display Selection" are shown below the result table. Those list can be expanded or closed using the triangles (cf. fig. page 10). The checkboxes below the "Display Selection point" allow you to define which columns have to be displayed in the result table.

The results of the database query can be printed out via the browser's print function. The result can be downloaded as an Excell worksheet for further statistical analysis by clicking on the "EXCEL" button.

The "BACK" button makes you return to the query form without losing the entries you made before (search criteria and data basis) – however the results it contains will not be saved in the History. The "NEW QUERY" button allows you to run a new query using the same query form.

#### 4.4 List of Saved Queries and Results – History

The History gives you a list of the created and saved queries of all members in your working group (cf. fig.). The table contains the following information:

- Search (Name of the query)
- Done at
- (Number of) Patients found

You can click on any column heading to sort the table by that column. The triangle in front of a query allows you to view the associated search criteria.

The query name and the number of patients found by your own searches are both hyperlinks. Listed searches created by other working group members are not fully accessible, you can only display the query form, but not the resulted patient list. Clicking on the query name enables repetition of the query. The query form opens and the associated search criteria are already entered. You can repeat the search and save the actual results. The link for the number of patients (only for your own searches) provides access to the full result list of the associated saved database query.

RecruitmentTool (training mode) EuroPa - (Version 1.6.12) - Netscape

File Edit View Go Communicator Help

Investigator: Markus Stoll Project: EuroPa  
Date: 01.05.2003 - 16:47

Welcome Help Logout  
Forms

| History |   |                     |                    |                |
|---------|---|---------------------|--------------------|----------------|
| No.     | Search  | Done by             | Done at            | patients found |
| 1       | ▶ <a href="#">L-Dopa Standard_2</a>               | Markus Stoll        | 01.05.2003 - 15:57 | 0              |
| 2       | ▶ <a href="#">update test</a>                     | Markus Stoll        | 29.04.2003 - 08:51 | 0              |
| 3       | ▶ <a href="#">update test</a>                     | Markus Stoll        | 29.04.2003 - 08:49 | 0              |
| 4       | ▶ <a href="#">update test</a>                     | Markus Stoll        | 29.04.2003 - 08:47 | 0              |
| 5       | ▶ <a href="#">L-Dopa Standard_2</a>               | Dr. Friederike Herz | 17.04.2003 - 15:54 | 0              |
| 6       | ▶ <a href="#">markus2</a>                         | Markus Stoll        | 17.04.2003 - 13:27 | 5              |
| 7       | ▶ <a href="#">L-Dopa Standard_2</a>               | Dr. Friederike Herz | 17.04.2003 - 10:35 | 11             |
| 8       | ▶ <a href="#">IPD</a>                             | Dr. Regina Wick     | 17.04.2003 - 10:34 | 8              |
| 9       | ▶ <a href="#">L-Dopa Standard first treatment</a> | Dr. Regina Wick     | 17.04.2003 - 10:33 | 0              |
| 10      | ▶ <a href="#">L-Dopa Standard first treatment</a> | Dr. Regina Wick     | 17.04.2003 - 10:32 | 10             |
| 11      | ▶ <a href="#">Suche nach Spass</a>                | Markus Stoll        | 15.04.2003 - 08:40 | 13             |
| 12      | ▶ <a href="#">L-Dopa Standard</a>                 | Dr. Regina Wick     | 09.04.2003 - 13:48 | 2              |
| 13      | ▶ <a href="#">Birth/Gender or Birth/Exam</a>      | Dr. Friederike Herz | 08.04.2003 - 21:09 | 7              |
| 14      | ▶ <a href="#">Suche nach Spass</a>                | Dr. Friederike Herz | 08.04.2003 - 21:08 | 0              |
| 15      | ▶ <a href="#">Suche nach Spass</a>                | Dr. Friederike Herz | 08.04.2003 - 21:07 | 0              |

Page 1 of 4

Document: Done

View of the query history